

South Lakefront Corridor Transit Study

Summary Report

Funded by the Regional Transportation Authority

prepared for

Chicago Department of Transportation

prepared by

Cambridge Systematics, Inc.

with

MKC Associates

URS Corporation

O-H Community Partners, Ltd.

EJM Engineering, Inc.

Final

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Table of Contents

1.0 Introduction.....	1
1.1 Study Purpose	1
1.2 Study Area	1
1.3 Project Approach and Scope	3
1.4 Overview of Public Involvement Approach.....	4
1.5 Study Outcome.....	5
2.0 Existing Transportation Infrastructure, Services, and Ridership	7
2.1 Metra Electric District (MED).....	7
2.2 CTA Rail.....	9
2.3 CTA Bus	11
2.4 Key Findings and System Improvement Opportunities	13
3.0 Existing Demographics and Travel Markets.....	15
3.1 Demographics.....	15
3.2 Trip Patterns	16
3.3 Current Trips on CTA	18
3.4 Current Trips on Metra	18
3.5 Key Findings and Market Opportunities	19
4.0 Existing Land Use and Development.....	21
4.1 Existing Land Uses	21
4.2 Development Projects.....	23
4.3 Corridor and Node Analysis.....	24
4.4 Key Land Use and Development Findings	27
5.0 Public Involvement in Selection of Projects.....	29
5.1 Stakeholder Identification of Goals and Objectives	29
5.2 Universe of Candidate Improvements.....	30
5.3 Public Input on Projects	34
5.4 Potential Projects and Example Improvements.....	35
6.0 Projects Underway or In Planning.....	37

7.0 Summary of Evaluation Findings for Example Improvements.....	41
7.1 New Bus Route on 83 rd Street.....	43
7.2 Enhanced Bus Service on King Drive.....	43
7.3 Rail Station Enhancements	44
7.4 Cottage Grove Bus Rapid Transit (BRT).....	44
7.5 Cottage Grove Streetcar	45
7.6 55 th Street/Garfield Boulevard Bus Rapid Transit (BRT).....	45
7.7 79 th Street Enhanced Bus.....	46
7.8 Gold Line.....	46
7.9 Transit-Oriented Development.....	47
8.0 Next Steps.....	49

List of Tables

1.	2006 Typical Weekday Boardings and Alightings from Study Area Metra Stations.....	9
2.	Average Weekday Entering Ridership at CTA Stations.....	10
3.	Average Weekday Ridership on Current CTA Bus Routes	12
4.	Key Characteristics of the Population in the Study Area.....	15
5.	Stakeholder Identification of Goals and Objectives	29
6.	Evaluation Screening Criteria.....	33
7.	Candidate Projects by Category	35
8.	Comparison of Example Project Improvements.....	42

List of Figures

1.	Map of Study Area.....	2
2.	Characteristics of Work and Nonwork Trips From the Study Area.....	17
3.	Transit Market Share	20
4.	Study Area Land Use.....	22
5.	Alignment of Jeffery Boulevard BRT.....	38
6.	Location of the Nine Example Improvement Projects	42
7.	Stations with TOD Potential	48

1.0 Introduction

The South Lakefront study area currently is served by a variety of transit services, including Chicago Transit Authority (CTA) local and express bus routes, CTA Red and Green Line rail rapid transit, Metra Electric District (MED) commuter rail service and local shuttle routes. Over the years, community leaders have expressed a desire for improvements to the public transportation services to meet the area's current and future transportation and economic needs. The study area includes a diverse assortment of neighborhoods from vibrant, active communities to struggling communities overburdened with vacant lots. Each of these neighborhoods, despite their differences, relies on the same bus routes, rail lines, and roadways to meet their diverse transportation needs. The study was initiated in order to identify gaps in the existing public transportation network's ability to meet current and future needs and to develop, evaluate, and recommend improvements to the public transportation network that can address those needs.

1.1 Study Purpose

The purpose of this study was to identify public transportation improvements that will enhance mobility for residents of the study area communities and increase access to jobs located throughout the city and surrounding areas. The study evaluated the costs and benefits of several transit improvement alternatives in order to recommend candidate projects, programs, and policies that merit more rigorous evaluation.

Over the last 20 years, the city, businesses, and the civic community have demonstrated strong leadership and commitment in working to address many of the economic and social challenges in the study area. This study further supports this ongoing commitment by encouraging dialogue among area residents, community leaders, institutions, developers, and city and regional transit and transportation officials.

The study developed consensus on the main transit-related issues and problems in the study area and on the most important transit system investments and related community development projects so that they can be advanced to more detailed study.

1.2 Study Area

The South Lakefront Corridor study borders are the lakefront on the east; the Stevenson Expressway on the north; the Dan Ryan Expressway, Norfolk Southern rail yard and Cottage Grove Avenue on the west; and 95th Street on the south. See the map shown in Figure 1.

Figure 1. Map of Study Area



The study area encompasses all or part of the following 13 communities:

- Douglas;
- Grand Boulevard;
- Oakland;
- Kenwood;
- Hyde Park;
- Woodlawn;
- South Shore;
- South Chicago;
- Washington Park;
- Avalon Park;
- Calumet Heights;
- Greater Grand Crossing; and
- Burnside.

The study area currently is served by the Chicago Transit Authority (CTA) Red and Green rapid transit lines, CTA local and express bus routes, and the Metra Electric District commuter rail trains.

The communities in the study area, though each have their own unique characteristics, share common transit corridors and historically have faced a similar array of economic and social challenges. These challenges include concentrations of low- to moderate-income residents, comparatively high unemployment rates, and limited retail and service businesses.

1.3 Project Approach and Scope

The study scope included analysis of existing transit service and infrastructure conditions in the study area, analysis of demographics and travel markets, analysis of existing land use and development opportunities, identification of needs and opportunities for improvements, and development and evaluation of example projects for further study. The study also included an extensive public and stakeholder involvement component.

Transportation issues within the study area generate a lot of interest within the community and therefore the approach for the study was to include community stakeholders and elected officials, as well as the Regional Transportation Authority, the transit providers, and the City of Chicago, in framing transit options for discussion and analysis. A Technical Advisory Committee (TAC) composed of representatives from the City and the transit agencies, provided technical guidance and direction. A Public Advisory Committee (PAC) composed of TAC members, public officials, and representatives of community organizations, institutions, and business groups provided the study with the community perspective and feedback on technical study components prior to meetings with the broader public.

The study produced several interim documents, described below.

Technical Memorandum 1: Existing Conditions Assessment dated June 7, 2011 documented the study area's socioeconomic profile, travel patterns, land uses, development, and transit services, infrastructure, and utilization.

The *Preliminary Alternatives* report dated September 16, 2011 listed transit improvement options developed for the study area ranging from small bus service improvements to major capital improvements. The list of improvement options was quite long and included projects suggested by the literature review, *Technical Memorandum 1*, and members of the Technical and Public Advisory Committees. In addition, a public meeting was conducted to identify issues important to the community at large and stakeholders were interviewed to determine what they felt were the major issues that needed to be addressed in the study. The detailing of major issues led to a set of objectives for the study to address. With these objectives in mind, the options were evaluated to derive a set of feasible alternatives that warranted more detailed review.

The alternatives were grouped into the following categories and examples from each category were further analyzed:

- Improvements to Existing CTA Bus Network;
- Improvements to Existing CTA Rail Network;
- North-South Bus Rapid Transit (BRT) and Streetcar;
- East-West BRT or Enhanced Bus;
- Changes to Metra Electric District Rail; and
- Other Improvement Ideas.

In addition to the service improvement categories listed above, the *Definition and Evaluation of Potential Projects* dated August 31, 2012 provided an overview and evaluation of Transit-Oriented Development for the study area. Assessments for each example project as well as next steps toward implementation were prepared.

1.4 Overview of Public Involvement Approach

A major activity of this study was the public involvement effort and coordination with key stakeholders. A public involvement plan was prepared early in the study process which identified key stakeholders and specified strategies that were used to inform and invite stakeholders and the public to participate in the South Lakefront Corridor Transit Study.

The goal of the Public Involvement Plan was to give the general public and key stakeholders opportunities throughout the study process to influence the transportation decisions being made for their community. The Public Involvement Plan had three objectives:

1. Identify stakeholder priorities for future transit operations and infrastructure improvements, and transit-oriented economic development to meet current and future needs;
2. Review and refine the recommendations based on stakeholder priorities; and
3. Promote and build broad public awareness of the recommendations.

The Public Involvement Plan included the following key involvement strategies; formation of a Public Advisory Committee, a series of public meetings, an information sharing campaign, and individual stakeholder meetings.

The Public Advisory Committee (PAC) served as the core group responsible for overall advice and guidance throughout the South Lakefront Corridor Transit Study process. The PAC assisted the City and the project team with building partnerships and sharing information with elected officials and community leaders as well as the public at large. The PAC advised the City on how to best engage the broader community. Formal meetings were held with PAC members throughout the project and were particularly helpful in forming the presentations at public meetings.

The public meetings provided an opportunity for local residents, community leaders, and business owners to hear updates on the transit study, offer their opinions, share their concerns, hear other view points, and provide the project team with a snapshot of community concerns and reactions to particular proposals. Three public meetings were held to encourage dialogue between the project team and the general public. The meetings were advertised to the public through the news media, community organizations, O-H Community Partners' e-mail distribution list, through social media networks, and through the PAC members' networks.

In order to reach a broad spectrum of community members, the information sharing campaign relied on a combination of traditional and new communication techniques to share information about the study. Fact sheets, e-blasts, and e-newsletters were sent to people who sent a note to the e-mail address, Facebook friends, and to the public meeting attendees. PAC members also were asked to send the materials to their networks and to include study information in newsletters and other communication methods that they managed.

Individual Stakeholder Meetings were conducted with individuals recognized as community leaders, elected or appointed officials, agency staff members, and neighborhood activists. The main purpose of the stakeholder interviews was to exchange information on project goals, study process, issues and needs to be addressed, and obtain comments regarding alternative solutions or recommendations. The interviews allowed the project team to learn about the stakeholders' perceptions of study area transit needs. The interviews also provided an opportunity to obtain details on sensitive issues and learn about community priorities that are sometimes difficult to bring forth and address in a more public setting.

1.5 Study Outcome

Transit service and facility improvement ideas were identified through a robust public involvement process. A total of 37 improvements were suggested. All of these projects have merit but it was not possible to evaluate them all. Projects were chosen for analysis based on the goals and objectives, and subsequent evaluation criteria, developed by the stakeholders. The study evaluated 9 potential projects and provided estimates of ridership potential, capital costs, and operating costs for each. An additional 11 projects were identified and described, but estimates of ridership and costs were not developed.

Of particular interest to many stakeholders was the analysis of MED alternatives, and whether any of these alternatives should be advanced for further study and eventual implementation. This study analyzed only one of these alternatives – the Gold Line. Based on several factors, including funding opportunities, cost-effectiveness, and development potential, the Gold Line project is not recommended to advance. However, the upcoming regional fare payment system mandated by the Illinois legislature to be implemented by 2015 may have an impact on ridership patterns in the South Lakefront Corridor. These impacts should be monitored and analyzed to discover any indications that the Gold Line, Gray Line, or extension of Green Line may produce sufficient ridership for cost-effective operation.

This study identified a corridor of relatively high population density without high-speed transit service between 35th and 55th Streets centered along Ellis Avenue. To address this issue and in response to public comment, BRT and streetcar alternatives on Cottage Grove Avenue were evaluated. The BRT is the lower-cost alternative, but with correspondingly lower ridership projections. It is recommended that both alternatives be reviewed further, considering the City of Chicago's BRT plans and with community input, to determine the optimum mode.

The study also identified a need to improve travel in the east-west direction, particularly on 79th Street, 83rd Street, and Garfield Boulevard. Route #79 ranks as the highest ridership bus route in the CTA system. Physical improvements to the 79th Street corridor, such as queue jump lanes and transit signal priority, could significantly improve speed and reliability for this route which represents a relatively large segment of CTA's riders. These improvements will be difficult to implement in this narrow corridor, but are relatively low cost and are recommended.

There is a one-mile gap without east-west bus service between 79th and 87th Streets. North of 79th Street, bus service is provided roughly every half-mile; whereas south of 79th Street, bus service is provided approximately every mile until 119th Street. The community identified this gap as a mobility issue and the study included an evaluation of a bus route on 83rd Street from the proposed Lakeside development to the Walmart at Stewart Avenue and 83rd Street. The evaluation showed that a bus route along 83rd Street would be cost-effective, although it is not clear how many of the projected riders will be diverted from other bus routes as opposed to the route attracting new riders to the system. A JARC grant has been obtained to provide some of the operating cost of this route however, the local match has not been identified. It is recommended that this project be implemented when local match funding is identified, and that ridership in the corridor, including routes #79 and #87, is monitored to determine the net ridership increase.

The number of trips between the study area and area surrounding Midway Airport is high, but the transit share of these trips is relatively low. A BRT service on Garfield Boulevard would provide a higher level of service in this corridor and could increase the transit share of trips to the Midway Airport area. Implementation of gold standard BRT would substantially impact parking availability in the corridor, and this requires further discussion within the community. It is recommended that this alternative be reviewed further, considering the City of Chicago's BRT plans and community input.

The two remaining example project improvements, rail station enhancements and Transit-Oriented Development (TOD), also are recommended for advancement. Guidance to promote station enhancements and TOD are provided in the *Definition and Evaluation of Potential Projects* report.

2.0 Existing Transportation Infrastructure, Services, and Ridership

The study area is entirely urban and is served by a network of transit and transportation infrastructure, including buses, trains, and roadways. This section provides an overview of the study area's existing transit network, and the types, characteristics, and levels of service provided by this network.

2.1 Metra Electric District (MED)

Metra provides commuter rail service in northeastern Illinois, operating 11 different lines that connect one of four downtown Chicago terminals with the region's suburbs and selected urban neighborhoods. Within the study area, Metra provides service on its Electric District (MED) line. The Main line of the Electric District operates between Millennium Station in downtown Chicago and the Village of University Park in Will County, with two branches off of this line serving the southeast side of Chicago (South Chicago branch) and some of the south suburbs of the city (Blue Island branch). The study area is served by stations located on a portion of the Main line and the South Chicago branch. (Blue Island branch trains provide much of the service to Main line stations in the city located south of 59th Street.) Stations from 59th Street north are served by the Main line service and the two branches. A large segment of the South Chicago branch has its two tracks located in the median of an arterial roadway with intersecting streets. The Main line operates on four tracks in an exclusive rail right-of-way located on an embankment. The Main line is shared with Northern Indiana Commuter Transportation District's (NICTD) South Shore Line which provides service between Millennium Station and South Bend, Indiana.

Metra service is primarily designed to serve peak-period commuting trips into downtown Chicago with more limited off-peak and weekend service; this is the most prevalent usage pattern as well. As of 2006 (the most recent year that boarding counts are available), more than 60 percent of boarding customers in the study area are traveling inbound during the a.m. peak period. The South Chicago Branch in particular is very heavily weighted toward use by peak period inbound commuters.

Service along both the Electric District Main line and South Chicago branch operates on a set timetable. During the week, Metra provides service from 5:00 a.m. until midnight. Service frequency during the peak period varies by location with some of the busiest Main line stations at 10-minute frequencies, but frequencies at most stations is every 20 to 30 minutes. Hourly service is provided at other times during weekdays and on Saturdays. On Sundays, Metra operates limited service with trains generally running every two hours in either direction from early

in the morning until late at night. Many of the stations along the Main Line, particularly those south of 59th Street, are “flag stops” where trains do not stop unless requested by a passenger.

The Metra Electric District line operates bi-level trains powered by catenary wire. Average age of the electric cars is approximately 32 years of age and Metra is using state capital bond funding to purchase new cars that will completely replace the existing fleet of Highliner electric cars. Full delivery of vehicles is anticipated within the next 5 years.

Metra reports that track along the Metra Electric District line is in good condition. Some elements of the supporting infrastructure would benefit from upgrades, including substations, signals, and catenary. Metra stations along the Main line vary in character, access, and passenger amenities from those along the South Chicago branch. The Main line stations are typically concrete pads next to the tracks that are located on top of embankments and accessed by stairs. These stairways are generally located within the track viaduct infrastructure and accessed from the sidewalk of the adjacent roadway. The typical pedestrian environment when accessing these stairways is unwelcoming, and locating the access point to the station can be difficult because of a general absence of pedestrian signage. With the exception of the 53rd Street (Hyde Park) and 55th-56th-57th Street Stations, Main line stations typically have passenger waiting areas that offer limited protection from the weather, limited seating and are not staffed by Metra personnel. Main line stations were built in 1925; stations at 47th Street (Kenwood), 53rd Street (Hyde Park) and 55th-56th-57th Street were reconstructed in 2005.¹

The South Chicago branch station platforms are located in the middle of the tracks and are typically accessed from either an ADA-compliant ramp or small set of stairs. Pedestrians typically access these station entrances via crosswalks across East 71st Street or South Exchange Avenue. Metra personnel do not staff these stations. Stations along the South Chicago branch were all rehabilitated/rebuilt between 2000 and 2007.²

Although the most recent Metra ridership data available is from 2006, shown in Table 1, the service patterns and schedule for Metra has been relatively stable and consistent along the Electric District line. Public concerns about the MED service in the study area (elaborated on in subsequent sections) include infrequent service (compared to CTA rapid transit), lack of fare integration with CTA which discourages multimodal trips (use of CTA for access and egress) and conditions at stations.

¹ URS Corporation, et al., “Regional Transportation Authority Capital Asset Condition Assessment,” August 2010, Appendix A-3a: Metra Inventory Tables, page 80.

² Ibid.

Table 1. 2006 Typical Weekday Boardings and Alightings from Study Area Metra Stations

Station Name	Inbound Boardings				Outbound Boardings			
	AM Peak	Midday	PM Peak	PM	AM Peak	Midday	PM Peak	PM
Main Line	1,731	392	247	86	76	289	697	93
South Chicago Branch	1,938	265	77	40	6	5	11	3
Total	3,669	657	324	126	82	294	708	96

Source: RTAMS, 2006.

2.2 CTA Rail

The CTA operates a heavy rail (i.e., rapid) transit network that is centered on downtown Chicago and serves much of the city as well as a number of near-in suburban areas. There are two CTA rail lines serving the study area, the Red Line and the Green Line.

The Dan Ryan (i.e., southern) Branch of the Red Line operates in the median of the major south-side expressway, with stations located at major street overpasses. Red Line service is provided 24 hours a day throughout the week, with trains operating at less than 5-minute headways during peak periods, 10 minutes during off-peak times, and every 15 to 20 minutes overnight or on weekends. During late night and overnight time periods, some CTA bus routes alter service patterns to feed into the Red Line to transport people to the downtown area.

The South Branch of the elevated Green Line operates to the east of the Dan Ryan, generally along South State Street and South Prairie Avenue. South of 59th Street, Green Line service splits into two branches, with the East 63rd Branch terminating at South Cottage Grove Avenue in the study area and the West Branch terminating outside the study area. Green Line service is provided seven days a week between 4:00 a.m. and 1:00 a.m. Headways are generally 8 minutes during peak periods and 10 to 15 minutes off-peak. Because trains alternate serving the two branches south of 59th Street, the two stations along the East 63rd Branch see half as many trains as the remainder of the Green Line stations in the study area.

The CTA is in the process of purchasing new (5000-series) rail cars. These cars will replace 2200- and 2400-series cars, which have exceeded their expected service life of 25 years. These new cars will make up a large portion of the CTA's current fleet requirement of 1,190 rail cars.

As rail infrastructure ages but funding is unavailable for repair work, the CTA institutes "slow zones" to reduce operating speeds over the affected track. The Red Line has been disproportionately affected by such slow zones. In June 2012, CTA announced its proposal to close the Red Line in the study area for five months to accommodate an accelerated schedule for these repairs.

CTA Red and Green line stations in the study area vary in that Red Line stations are located within the median of the Dan Ryan expressway and Green Line stations are elevated. Both Red and Green Line stations house ticket vending machines, CTA personnel, system information, and turnstiles. Platforms are reached via escalator, stairway, or elevator from the main station structure, and typically offer a covered canopy, seating, a public audio address system, and variable message boards. (Note that several stations in the study area are not ADA accessible, including King Drive on the Green Line and Garfield, 63rd Street, and 87th Street on the Red Line.) Connections to CTA bus routes are typically located immediately adjacent to the station entrances. Red Line stations within the study were placed in service in 1969 and were either reconstructed or repaired in either 2001 or 2005.³ Green Line stations were placed in service in 1892 and 1893. Station reconstruction occurred between 1983 and 2001; the 35th Street-Bronzeville-IIT station was repaired in 2001 and the King Drive station was repaired in 1991-1993.⁴

There are roughly 29,000 average weekday boardings at CTA rail stations in the study area, and approximately 60 percent of this ridership occurs at Red Line stations. None of the Green Line stations has a higher number of station boardings than any of the Red Line stations in the study area as shown in Table 2.

Table 2. Average Weekday Entering Ridership at CTA Stations

Station	Line	September 2011
63 rd	Red	3,782
Garfield	Red	4,123
47 th	Red	3,680
Sox-35 th	Red	6,018
Cottage Grove	Green	1,480
King Drive	Green	695
Garfield	Green	1,463
51 st	Green	1,279
47 th	Green	1,478
43 rd	Green	1,121
Indiana	Green	1,058
35 th -Bronzeville-IIT	Green	2,624

Source: RTAMS, CTA Ridership Reports.

³ URS Corporation, et al., "Regional Transportation Authority Capital Asset Condition Assessment," August 2010, Appendix A-2a: CTA Asset Inventory Tables, page 121.

⁴ Ibid, Appendix A-2a: CTA Asset Inventory Tables, page 123.

Ridership at Red Line stations in the study area has grown in recent years, while boardings at Green Line stations have generally fallen over the past five years, particularly at the stations at the far southern end of the line (Garfield, King Drive, and Cottage Grove). Increases in ridership at Indiana and 43rd could be the result of increased residential development that had been occurring in the northern portions of the study area through the mid-2000s.

Some members of the public expressed concerns during this study about the conditions at some CTA rail stations and in the areas around stations that they believed may inhibit ridership. The study undertook a special review of the stations identified by the public and found that stations were not in need of major repairs but recommendations for continuing maintenance in and around the stations were identified.

2.3 CTA Bus

A gridded network of CTA bus service serving the study area can generally be categorized into three service types: local, express and neighborhood circulators.

CTA local bus service in the study area consists of 24 bus routes operating on the street grid network with north-south bus routes connecting to east-west routes. The routes are generally spaced every half-mile to one-mile apart. With the exception of routes #1, #24, #39, #59, and #100, each of the bus routes operates throughout the day seven days per week, with headways ranging from less than 5 minutes during the peak periods to every 15 to 30 minutes during the off-peak. Route #4 provides north/south local bus service overnight as far south as 63rd Street, while routes #55, #63, and #79 provide east-west local bus service overnight.

The five existing express bus routes collect customers from neighborhoods and corridors within the study area and then travel express to downtown along Lake Shore Drive. Routes #2, #6, and #X28 each travel express from 47th Street, while routes #14 and #26 each travel express from 67th Street. Of these routes, only routes #6 and #14 provide daily service outside the peak travel periods on weekdays. The express routes have varying origins in the southern portion of the study area, and also serve different portions of the downtown (thus providing options for commuters working in the various downtown districts). Customers may choose one or another of these routes based not only on proximity to their home, but proximity to their downtown destinations as well. Several express (limited-stop) bus routes in the study area were cut as part of a systemwide service reduction in 2010 due to budget constraints. These include routes on Cottage Grove Avenue, King Drive, and Garfield/55th Street.

Four neighborhood circulators serve the study area. These include three routes (#170, #171, and #172) that serve the needs of students, employees, and visitors at the University of Chicago. In addition, the #N5 bus route connects the South Shore neighborhood to the CTA Red Line during the overnight period, when many other bus routes are no longer operating.

In addition to those mentioned above, route #10 is a special service that operates only during the summer months and on holidays, and exists primarily to shuttle tourists to and from the Museum of Science and Industry. Route #192 also serves a specific market, commuters from the downtown Metra terminals to the University of Chicago and its associated medical facilities.

The CTA currently operates a fleet of 1,782 buses. The CTA has heavily invested in its bus fleet in recent years, including the purchase of 1,293 new buses between 2006 and 2009. These buses are fully accessible and air conditioned, and are equipped with ADA-compliant LED destination signage; automated GPS next-stop announcement system; security cameras; and bicycle racks. CTA's Bus Tracker System enables passengers to use computers, smart phones and/or text messaging to find out when the next bus will arrive at their stop.

The character and level of passenger amenities at CTA bus stops varies widely. While some stops are little more than a metal pole with CTA signage attached, others offer semi-enclosed shelters with seating and real-time transit system information. The shelters are provided through an agreement between the advertising firm, JCDecaux, and the City of Chicago. The CTA works with the City to determine which stops receive shelters, and the process is guided by a number of factors, including available space in the public way, proximity to an electrical connection and aldermanic input.⁵

Ridership on CTA bus service is significantly affected by changes in service levels and patterns on a year-to-year basis, making direct comparisons across years difficult. Table 3 illustrates the average weekday ridership on CTA's current bus routes serving the study area.

Some members of the public expressed concerns during this study about overcrowding, speed, and service reliability on busy routes, particularly on bus routes #79 and #3.

Table 3. Average Weekday Ridership on Current CTA Bus Routes

#	Route Name	Route Type	September 2011
1	Indiana/Hyde Park	Local	3,092
2	Hyde Park Express	Express	2,895
3	King Drive	Local	23,800
4	Cottage Grove – OWL	Local	25,739
N5	South Shore Night Bus – OWL	Circulator	570
6	Jackson Park Express	Express	12,158
10	Museum of Science and Industry	Circulator	1,375
14	Jeffery Express	Express	13,011
15	Jeffery Local	Local	9,518
24	Wentworth	Local	3,792
26	South Shore Express	Express	3,352
28	Stony Island Local	Local	5,781
X28	Stony Island Express	Express	4,558
29	State	Local	16,096
30	South Chicago	Local	4,099
35	35 th	Local	5,826
39	Pershing	Local	2,448

⁵ Tracy Swartz, "Western wears the shelter crown," *Chicago Tribune*, January 5, 2010.

#	Route Name	Route Type	September 2011
43	43 rd	Local	2,468
47	47 th	Local	12,482
55	Garfield - OWL	Local	14,448
59	59 th /61 st	Local	4,350
63	63 rd - OWL	Local	23,095
67	67 th - 69 th -71 st	Local	16,103
71	71 ^s /South Shore	Local	10,840
75	74 th -75 th	Local	9,148
79	79 th -OWL	Local	34,834
87	87 th -OWL	Local	17,535
95E	93 rd -95 th	Local	5,722
100	Jeffery Manor Express	Express	1,090
170	University of Chicago/Midway	Circulator	254
171	University of Chicago/Hyde Park	Circulator	1,031
172	University of Chicago/Kenwood	Circulator	1,667
192	University of Chicago Hospitals Express	Express	797

Source: RTAMS, CTA Ridership Reports.

2.4 Key Findings and System Improvement Opportunities

The study area is generally well served by the existing transit network: CTA bus, CTA rail, and Metra commuter rail service. CTA Service Standards specify that during peak hours buses will have up to 60 passengers on-board a standard 40-foot bus. At these loads, over 20 passengers will be standing. An analysis of CTA rail peak loadings and Metra's capacity utilization rates suggest that the existing travel demand appears to be met by existing service. Changing market conditions and development could change that situation, especially in the northern sub-areas and at the U.S. Steel (USX Southworks) redevelopment site (proposed Lakeside project).

There are two comparatively high-density areas in the study area that may be seen as underserved, as portions are more than a half-mile from rail stations:

1. The Cottage Grove Avenue corridor between 35th Street and Garfield Boulevard in the Oakland, Kenwood, and Grand Boulevard neighborhoods. This area includes numerous high-density residential districts, and although it is located adjacent to Lake Shore Drive and the Metra Electric District right-of-way, is not within a half-mile of a rapid transit service connecting into the downtown. This corridor is, however, served by CTA's #4 Cottage Grove bus route, which provides daily local service 24 hours per day. The Cottage Grove Corridor between the Loop and Hyde Park, which has higher densities and experiences more development, is probably the only section in the study area that could support major new rail investment.

2. The South Chicago neighborhood along Yates Boulevard south of 79th Street. This area lies between the South Chicago Branch of the Metra Electric District to the east, and the CTA express bus (Routes #14 and #X28) to the west.

The bus network in the study area is well-utilized by residents and workers, and remains the most commonly used mode for north-south trips, despite the presence of the three rail transit corridors. Bus system service improvements that would most directly impact the existing customer base would be improvements to travel times and reliability. This could include improved frequency or span of service on existing routes, additional (or restored) express bus service, or lower-cost infrastructure investments (e.g., transit signal priority, bus-only lanes) that improve schedule adherence and reduce travel time.

Existing and foreseen development patterns along Metra's South Chicago branch would be unlikely to justify major new investment in the line, and it is questionable that the market would support significantly higher service levels. There are other lower-cost changes in service attributes that could improve the quality of service, such as improved headways where and when they are most deficient and more attractive stations with passenger amenities where current stations are deficient. The much- (and long-) discussed regional fare system (now mandated to be in place by 2015) would be especially attractive to transit users in the study area and might significantly increase use of the MED.

All potential investments in new and improved transit services need to be considered in the context of Metra's and the CTA's backlog of State of Good Repair projects and constrained operating budgets, which have delayed already planned rail line projects. The need to obtain a local funding match and the added expense of operating new service (which Federal funds do not pay for) would probably preclude the advancement of any major investment into the process of seeking Federal funding for infrastructure improvements.

3.0 Existing Demographics and Travel Markets

3.1 Demographics

The South Lakefront study area is home to about 340,000 people and 135,000 households in 13 community areas. Together, these 13 community areas constitute about 11.5 percent of the population of the city of Chicago.

The study area has a population density of about 12,800 persons per square mile, which is almost exactly the same as the population density of the city of Chicago as a whole. The most densely populated parts of the study area are concentrated along the Metra Electric District line. Key characteristics of the population in the study area are shown in Table 4.

According to the CMAP 2009 population and employment data, the study area has a total employment of about 67,000 jobs, or about five percent of the 1.3 million jobs in the city. Close to 63,000 of these jobs are in non-retail sectors. Just a little less than half of the employment in the study area is located in the Hyde Park community area, due largely to the presence of The University of Chicago. The Douglas community in the northern part of the study area is the next biggest employment center with about 10,800 jobs. Most of the other community areas host relatively few jobs.

Table 4. Key Characteristics of the Population in the Study Area

Characteristic	Comparison to Citywide	Study Area	Citywide Average
Household Size	Smaller Household	69% are one- or two-person households	64%
Household Workers	Fewer Working Adults	38% of households have no working adults	26%
Household Vehicles	Fewer Vehicles	35% of households have no vehicles	25%
Household Vehicles versus Workers	Same	33% of all households in the study area had fewer vehicles than workers in the household (i.e., a “vehicle deficit”). The highest proportion of households with a vehicle deficit was in Hyde Park, followed closely by Kenwood, Woodlawn and Washington Park.	33%

Characteristic	Comparison to Citywide	Study Area	Citywide Average
Household Income	Lower Income	42% of households in the study area have annual incomes less than \$25,000	29%
Unemployment Rate	Higher Rate	17%	10%
Senior Citizens	Larger Proportion	13% of the population was age 65 and over	10%

Source: American Community Survey 2005-2009 data.

3.2 Trip Patterns

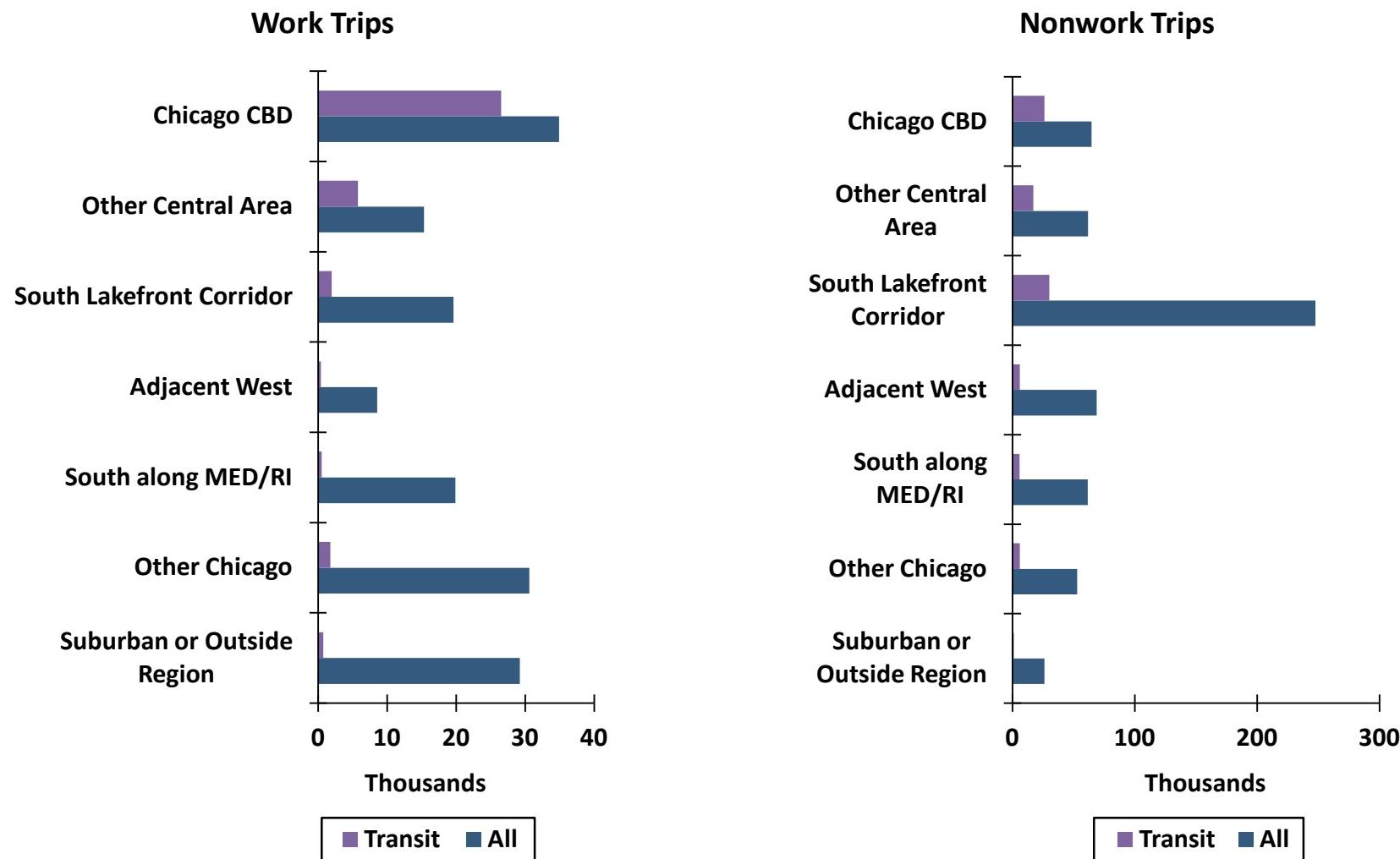
Residents of the study area produce a total of 741,000 daily trips (for all purposes) on auto and transit modes combined. Further, the study area attracts 535,000 daily trips (for all purposes) on auto and transit combined. The large difference between the trips produced and attracted is a reflection of the fact that the study area is more residential than commercial in nature. Of the 741,000 trips produced by the residents of the study area, only 267,300 trips, or roughly 26 percent, have attractions within the study area. The market share of transit for trips that start and end within the study area is about 12 percent.

Of the 741,000 daily trips produced in the South Lakefront study area, 610,000 trips use an automobile, while the remaining 131,000 trips (or 18 percent) use transit. Of the 535,000 daily trips attracted to the study area, 477,000 trips use an automobile, while the remaining 58,000 (or 11 percent) trips use transit. Transit use, therefore, appears more prevalent for trips produced in the study area, than for trips attracted to the study area. The Kenwood and Hyde Park area is the most active portion of the study area, both producing and attracting the highest number of trips in the study area and accounting for 22 percent of all trips.

Residents of the study area generate a little over 158,100 daily trips for work commute purposes, and the jobs located in the study area attract about 82,000 work trips. Transit serves about 24 percent of work trips produced in the study area but only 7 percent of those attracted to the study area. Transit serves 10 percent of those work trips made entirely within the study area. The Hyde Park and Kenwood area is the most active generator and attractor of work trips accounting for 31 percent of work trips.

Figure 2 below shows the destinations of trips generated for work and nonwork purposes by study area residents taken on all travel modes and on transit.

Figure 2. Characteristics of Work and Nonwork Trips From the Study Area



Source: Chicago Metropolitan Agency for Planning (CMAP) 2010 Travel Demand Model Estimate.

3.3 Current Trips on CTA

The CTA Origin-Destination (O-D) survey conducted in 2007 indicated that a little over 100,000 CTA trips were produced in the study area, while about 89,000 trips were attracted to the study area, and more than 35,000 trips occurred entirely within the study area. Riders making trips entirely within the study area were the most transit-dependent, with close to 80 percent of the riders indicating that they did not have a private vehicle available for the reported trip. Walking is the dominant mode for accessing CTA bus and rail.

Work trips constituted the majority of trip purposes on CTA across all time periods. School trips were the next major category. Nearly 20 percent of all CTA riders traveling from the study area were students. More than 25 percent of riders traveling to the study area during the AM peak were traveling for school. This share is most likely influenced by the University of Chicago students.

Of the more than 100,000 inbound CTA trips during the AM peak, about 40 percent had a destination in the CBD. The shares of trips destined to the CBD decrease to 33 percent, 14 percent, and 20 percent for the midday, PM peak, and evening period, respectively.

3.4 Current Trips on Metra

The Metra OD Survey conducted in 2006 indicated that work and school trips predominate. Work was the most popular trip purpose, nearly 85 percent, for trips from the study area towards downtown. School was a popular purpose, particularly for trips in the outbound direction destined to the study area.

A substantial share of inbound travelers on the South Chicago branch, more than 35 percent, use drive access. Drive access also is high for inbound travelers destined to the study area from the Main line stations located south of the study area. This segment also had a sizeable share using the “drop-off” mode. This may point to relatively long access trips and limited mobility options among this segment.

A sizeable share of outbound travelers from the study area used carpools for access to the stations. This also may imply that travelers in this segment have low levels of vehicle ownership and limited mobility options for their work and school trips.

Riders traveling to the study area on the outbound trains predominantly walk to their downtown stations but some also use other transit options.

As expected, most of the riders boarding Metra at study area stations were destined to downtown. The majority of destinations are located within the Loop. Riders alighting at Van Buren seem to travel to locations along Van Buren and Jackson Street and probably all the way to the locations near Union Station by CTA buses. In the morning hours (until noon when the survey ended), more than 2,200 riders from the study area exited at Randolph Street (Millennium Station) and more than 1,000 riders exited at Van Buren Street station.

Hyde Park stations attract most of the riders traveling to the study area. Three stations in Hyde Park attracted more than 1,100 riders combined (until noon). Other stations with sizable alightings include 27th Street, 63rd Street, and 93rd Street (South Chicago).

There is a compact group of riders residing in Hyde Park close to station locations. The South Chicago branch riders seem to reside along the rail line, however, the 93rd South Chicago station attracts a substantial amount of riders from outside the study area. Concentrations of riders were observed along Torrence Avenue and South Commercial Avenue, in the East Side as far south as 115th Street, and in the Whiting area in Indiana.

3.5 Key Findings and Market Opportunities

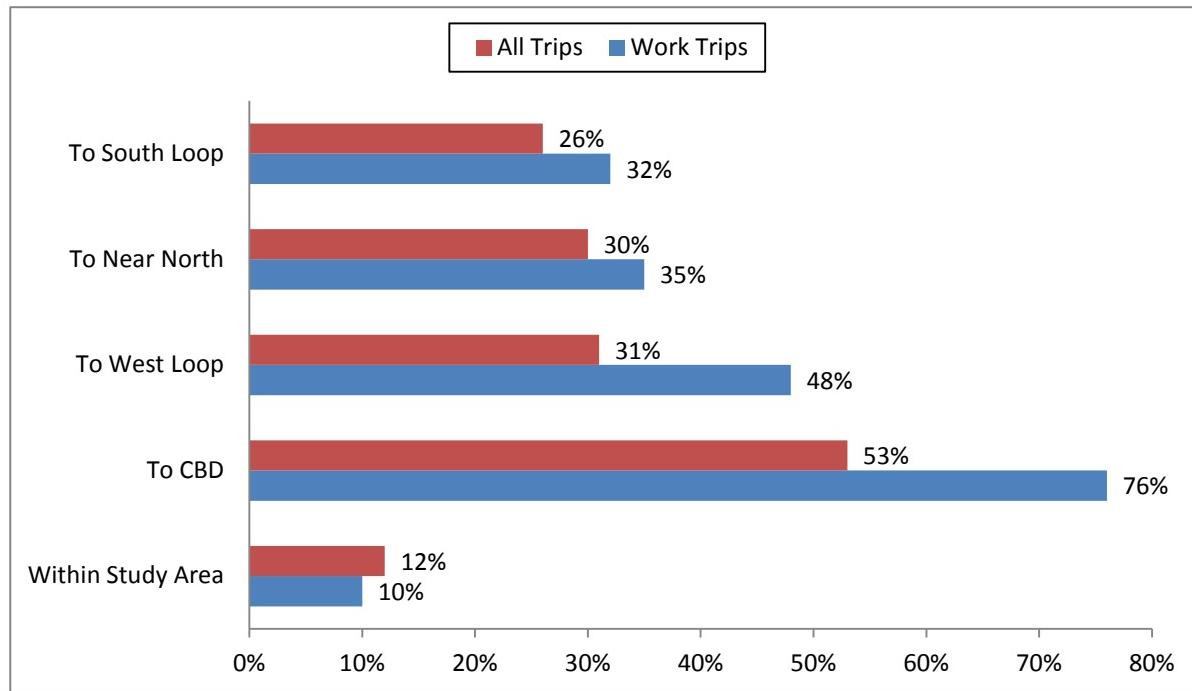
The market analysis focused on three major items: socioeconomic conditions of the study area; travel patterns to, from, and within the study area; and finally the transit use patterns to, from, and within the study area. Several key insights emerged from this analysis.

Although the individual neighborhoods that make up the study area are not homogenous, the study area generally has higher unemployment, lower-income levels, and lower auto-ownership levels, than the city in general, indicating the presence of a large transit-dependent population. This population relies on transit for both work and nonwork trips and for the unemployed nonwork travel is obviously the current primary need. While some of these destinations are found downtown and can be accessed by transit services geared to downtown travel, others are located in various places in the study area, in other parts of the city and in suburban areas. The Hyde Park area is a major center for jobs, higher education, and medical services within the study area and is, therefore, a destination of particular interest. Other destinations are more dispersed and many are outside the study area. Locations that are hard to reach by transit may not be observed in the data on current travel patterns.

The region is expected to experience a modest population and employment growth over the next 30 years. Therefore, current transportation needs, rather than anticipated growth, would be the primary basis for transportation planning in this area. However, the large new development proposed for the U.S. Steel (Lakeside) site and other large developments merits consideration in planning future improvements.

Despite the high levels of transit dependency, market share of transit for work trips made entirely within the study area is only 10 percent. In contrast, the transit share for Chicago CBD-bound work trips from the study area is 76 percent, and to areas near the CBD is between 32 and 48 percent as shown in Figure 3. Similar differences between travel destinations hold true when the universe of trips is expanded from work trips to all purposes. The low market share of transit combined with the high proportion of transit-dependent population in the study area indicates that there may be potential to increase the transit market share within the study area by improving transit services.

Figure 3. Transit Market Share



Transit market share is somewhat lower for trips between different parts of the study area than for trips within smaller areas around existing transit lines. To some extent this is to be expected. Transit market share for trips between low-income community areas such as Washington Park and Oakland and the key attraction centers in the Kenwood/Hyde Park area appears particularly low. These markets present an opportunity for transit.

While work and nonwork travel to the CBD and surrounding districts shows a high transit market share, travel to other districts such as the Illinois Medical District has an extremely low transit market share despite a high overall demand. In fact, connecting such extended central urban areas with the South Lakefront study area either through direct transit services, or through frequent connections from the CBD, represents a travel market of interest.

Travel between the South Lakefront study area and the Midway Airport area is fairly large. Yet, the transit share is only about 10 percent for work and nonwork trips combined. The transit market share falls to five percent for work trips only. This market appears to be another potential opportunity for transit.

Although not a major employment hub currently, the South Chicago community has the highest anticipated job growth in the study area by virtue of the planned Lakeside development at the former U.S. Steel site. Connecting this area to the low-income neighborhoods in Washington Park and Oakland will be important.

4.0 Existing Land Use and Development

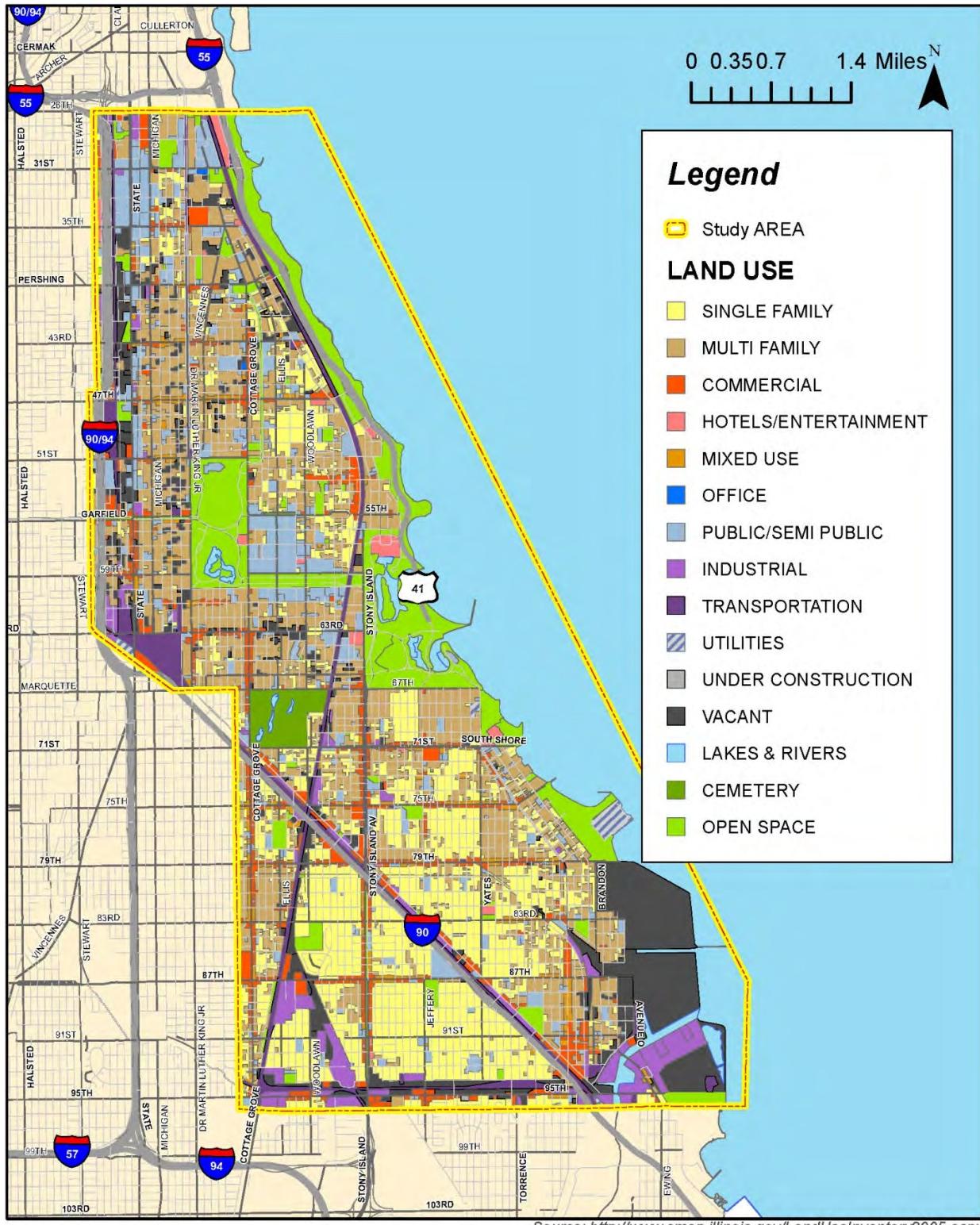
Good transportation service and infrastructure enhance the market value of land and encourage development patterns of higher value uses and density. In turn, such land development patterns provide a strong user market ensuring successful transportation investments. When transportation planning and land use policy are considered together as a matter of public policy, infrastructure investments can be targeted to serve the largest user base most efficiently and to the maximum benefit in terms of land development potential.

4.1 Existing Land Uses

The study area contains the full range of land uses in diverse patterns of density and mixture, as illustrated in Figure 4 Study Area Land Use, on the following page. The more dominant land uses found throughout the study area include:

- Multifamily residential is located throughout the corridor, and ranges in density, massing, and architectural style; from late 19th century row-homes to middle 20th century mid-rise flats to contemporary high rises;
- Single-family residential is found in its largest concentration in the Avalon Park, Calumet Heights, Burnside, South Shore, South Chicago, Kenwood, and Hyde Park community areas;
- Open space and parkland includes the lakefront, Jackson Park, Washington Park, South Shore Cultural Center/Country Club, the private Oakwoods Cemetery, as well as many smaller neighborhood parks;
- Institutional uses are present as large concentrations around the Illinois Institute of Technology, Mercy Hospital, University of Chicago, Mt. Carmel High School, and Chicago Vocational High School, among numerous other smaller schools.

Figure 4. Study Area Land Use



Other land uses found in the corridor include: business district/commercial, industrial, government, and vacant land. As illustrated in Figure 4, there are areas where single land uses have agglomerated to cover moderately large territory, primarily the single-family residential and multifamily residential in the interior blocks served by the half-mile collector streets, and institutional campuses. However, in much of the study area and along many of the main corridors of arterials and collector streets, the land uses are quite mixed.

4.2 Development Projects

The study area contains numerous Tax Increment Finance (TIF) Districts whose incremental property tax revenues can be used for a variety of projects to assist in community and economic redevelopment. The Districts have contributed to numerous development projects in the study area.

A variety of development and redevelopment projects have been initiated or completed in the study area since 2000. The Lake Meadows Redevelopment, build-out of Oakwood Shores, and development of Lakeside, (formerly USX Southworks and U.S. Steel), are likely to be the projects with the greatest impact in terms of new residential and employment opportunities. The Lakeside development encompasses approximately 500 acres between 79th and 87th Streets on the lakefront. The master plan envisions over 13,000 residential units, 17.5 million square feet of retail, approximately 125 acres of open space/park land with bike paths, a 1,500 slip marina, and a new high school. Smaller-scale and infill development and renovation projects by for-profit and not-for-profit developers, community agencies, and private property owners also are occurring throughout the corridor and are important community investments.

Institutional and government entities with facilities in the study area are important anchors for the stability and vitality of surrounding neighborhoods. Not only do these provide employment opportunities, they bring customers and visitors into the study area. Policy decisions to expand or relocate facilities in the study area reflect conscious decisions to invest in the long-term prospects of the study area and serve as catalysts or risk-reducing factors for other development opportunities.

As a large attraction and employment center in the study area, plans for the University of Chicago are relevant to this study. The University's Master Plan is a 20-year plan that has yielded 17 new buildings within the University of Chicago Campus boundary adding up to over 1,000,000 square feet of instructional space; 1,200,000 square feet of medical space; 330,000 square feet of dormitory space; and 315,000 square feet of nursery/early childhood development space. The South Campus project will bring major improvements to university-owned land south of the Midway Plaisance and north of 61st Street. Projects in this area include new student residences and dining hall, a mixed-use building that will include retail stores, expansion of the Harris School of Public Policy building, expansion of the Chicago Booth school of Business building, and new streetscapes, landscaping, and parking structures.

In addition to improvements on the immediate campus, the University is committed to encouraging redevelopment in the surrounding areas to ensure the best experience for

students, employees, visitors, and neighbors alike. They contributed funds toward the renovation of the 53rd and 55th-56th-57th Street MED Main line stations. They are encouraging and participating in redevelopment along 53rd Street between Lake Park Avenue and Drexel, with particular focus on the blocks closest to the Metra station to improve the quality and selection of retail and entertainment options. They also recognize 47th and Cottage Grove as an important retail redevelopment node at the northwest corner of their campus area, and the CTA Green Line Garfield station area at 55th and King Drive as a long-term redevelopment focus to improve safe connections for campus stakeholders.

4.3 Corridor and Node Analysis

This study assessed the character of the study area against the concept of Transit-Oriented Development (TOD) or Transit-Friendly Development (TFD). The definition presented in the *Transit Friendly Development Guide* (2009) is:

[TOD is a pattern of] development which is oriented towards and integrated with adjacent transit. The development incorporates accessibility and connectivity and is a multiuse mix of dense development that generates significant levels of transit riders.

Due to the large geographic scope of the project study area, this assessment analyzed the area in the context of corridors and nodes. Corridors are transportation-oriented districts centered along main streets. Nodes are quarter- to half-mile walk zones centered around commuter rail or heavy rail stations.

The major north-south and east-west corridors in the study area were reviewed along with the half-mile zones around rail stations, and were characterized for their potential for development or redevelopment.

The corridor analysis revealed the following:

- **31st Street** – The empty lot at the northwest corner of Cottage Grove and 31st, and the properties on the block between Cottage Grove and Lake Park Avenue present redevelopment opportunities. 31st Street has access from I-94 and on-off access to Lake Shore Drive. It is serviced by CTA bus, but has no on-street CTA rail or Metra rail stations. Development/redevelopment potential includes long-term redevelopment plans for Prairie Shores and Lake Meadows, and the potential spin-off it may encourage in the area.
- **35th Street** – Development/redevelopment potential includes the approved long-term redevelopment plans for Park Boulevard and Lake Meadows on either end of the corridor, and the potential spin-off it may encourage in the area.
- **Pershing Road** – There are active redevelopment plans for Park Boulevard and Oakwood Shores on either end of the corridor, and completed redevelopments at Jazz on the Boulevard and Lake Park Crescent. These projects may generate spin-off development in the adjacent areas, although this may be somewhat tempered by the presence of intermediate pockets of blight.

- **47th Street** - Development/redevelopment activity includes the pockets of vibrant redevelopment activity such as construction of the Harold Washington Cultural Center, the Marketplace, Blu 47 restaurant, the Streetlife Art Gallery, Lake Park Point Shopping Center, and the Little Black Pearl Community Center. However, multi-block stretches of blight also are present in the corridor.
- **Garfield Boulevard** - Factors in the development/redevelopment potential along the corridor include an abundance of vacant land, and good transportation service consisting of vehicular access to I-94, CTA Red and Green Line stations, and a MED station. There are proposed redevelopment projects at Grand Boulevard Plaza and the former Shulze Bakery building that could create spin-off projects, and much development activity in the Hyde Park community area on and around the University of Chicago campus. While Washington Park is generally revered as a great community asset, past redevelopment efforts have been tempered by the presence of intermediate pockets of blight and disinvestment around the park. The park also functions as a physical barrier between the Hyde Park and Washington Park communities.
- **63rd Street** - Development/redevelopment activity includes the pockets of vibrant redevelopment activity around the Green Line stations and in Hyde Park. There are multi-block stretches of vacant land but these are adjacent to current redevelopments and may experience spin-off benefits.
- **71st Street** - The character of the corridor is fairly built-out. Redevelopment options would likely require property assembly and demolition of current outdated commercial/mixed-use buildings.
- **79th Street** - Development/redevelopment potential is constrained by the current built-out nature of the corridor. Other than the Lakeside site, there is an absence of any major catalyst projects along or adjacent to the corridor.
- **87th Street** - Development/redevelopment potential is a balance between the stable nature of land uses along most of the corridor with the emergence of community retail centers at the west end of the study area and around I-94. Redevelopment triggered by the Lakeside project may include commercial or residential uses.
- **95th Street** - Development/redevelopment along this corridor is possible given the availability of vacant properties near anchoring institutions, retail centers, and transit stations.
- **Dr. Martin Luther King Jr. Drive** - Development/redevelopment activity includes the approved long-term redevelopment plans for Lake Meadows and completed commercial/entertainment redevelopments at 47th Street. Dense residential neighborhoods along the corridor may limit redevelopment except as renovation and rehabilitation.
- **Cottage Grove Avenue** - Development/redevelopment activity along the corridor includes current and recent projects at Oakwood Shores, in Hyde Park, and at 87th Street.

- **Stony Island Avenue** – The corridor has a position as a solid commercial zone, but without significant recent anchor projects or upcoming plans. The corridor is predominantly an auto-oriented corridor through the study area.
- **Jeffery Boulevard** – Development/redevelopment potential is probably limited based on the already built-out nature of the corridor, with the exception of renovation projects or the occasional infill sites.

Examination of the station nodes revealed the following development or redevelopment opportunities, which are grouped by rail line.

The elevated CTA Green Line traverses the Douglas, Grand Boulevard, Washington Park, Greater Grand Crossing, and Woodlawn community areas. Dominant land uses adjacent to the station areas include residential and institutional uses with some commercial concentrations. Many study area neighborhoods surrounding Green Line stations have experienced disinvestment over recent decades and vacant lots and underutilized/abandoned structures are prevalent. These lots were the sites of many former Chicago Housing Authority high rise buildings. There are, however, some stations where development plans are in place or are in development, such as 35th-Bronzeville-IIT, 43rd, Garfield, and Cottage Grove.

The CTA Red Line runs down the median of I-94, with pedestrian access and CTA bus connections on the vehicular overpasses crossing the expressway. The expressway and adjacent parallel side streets (Wentworth Avenue, La Salle Street, or Federal Street on the east) present a physical barrier to development close to the stations, and the auto-oriented nature of the expressway influences the development character of neighboring blocks. The Red Line station areas are primarily industrial or commercial in nature, which could limit their development potential. However, the Sox-35th station will eventually benefit from redevelopment of Park Boulevard, and the Legends South redevelopment will impact the remaining Red Line stations in the study area. These redevelopment efforts coupled with infill redevelopment plans and high transit connectivity may catalyze additional redevelopment in the station areas.

The MED South Chicago Branch service runs through long established, nearly fully built-out neighborhoods in the South Chicago and South Shore community areas. Generally speaking, land use patterns are fairly firmly established, with new development mainly possible on infill sites or through redevelopment of aging or obsolete structures. Commuter rail is viewed as an asset in this study area, but because of the current service levels, it may induce comparatively less development than the heavy rail infrastructure elsewhere in the study area. Additionally, the current infrastructure design of raised platforms, overhead catenary, and large trains make a more imposing street-running presence than alternative streetcar or light rail transit systems. Development/redevelopment may be limited to renovation, based on the current built-out nature of the station areas. The exceptions are South Shore, 87th and 93rd Street stations. The area surrounding South Shore station has some vacant property, which presents infill development opportunities. The 87th station area could benefit from the Lakeside development, which may generate spin-off development of the light industrial uses near the station into developments that are more compatible with residential. Lastly, the vacant lots, underutilized commercial uses, and plentiful parking lots surrounding the 93rd station provides redevelopment opportunities.

4.4 Key Land Use and Development Findings

The study area contains the full range of land uses at all levels of density and types of urban design, and numerous development projects, institutional anchors, and shopping destinations. A variety of development projects and enhancements to the institutional anchors in the study area have recently been completed, with more large-scale projects under construction and in planning. The conclusions are described by subarea below.

The *northern third of the study area* (the Douglas, Grand Boulevard, Oakland, and Kenwood community areas, north of 47th Street) contains the most redevelopment projects, particularly residential redevelopments. Many of the former CHA housing projects located in this area have been, or are in the process of being rehabilitated or replaced with different formats under the *Plan for Transformation*⁶ and will reintroduce large population numbers back into the study area. Jazz on the Boulevard and Lake Park Crescent are two notable examples of completed phases or projects, and Oakwood Shores, Park Boulevard, and Legends South are well under way. The Lake Meadows residential and commercial rehabilitation/renovation also will add significant commercial space and upgraded residential units. Independent infill construction projects and renovations have begun to rejuvenate or gentrify many formerly upscale neighborhoods in Kenwood, Oakland, and Bronzeville that had experienced disinvestment and population flight during the later decades of the 20th century. Portions of Douglas and Grand Boulevard are still suffering from the blighting presence of unsuccessful public housing projects and will need significant market intervention to jump-start redevelopment. The *Plan for Transformation* redevelopments planned for this area should have a catalytic (or at least stabilizing) effect once real estate markets recover. Illinois Institute of Technology (IIT) is a solid institutional anchor in this part of the study area, and it serves as a local advocate for new residential and commercial development in the surrounding neighborhoods that will benefit its students and faculty as well as contribute to more stable neighborhoods.

In the *middle sector of the study area* between 47th Street and 71st Street (the Washington Park, Hyde Park, Woodlawn, and portions of the South Shore and Greater Grand Crossing community areas), land use and development conditions are quite polarized. Many areas west of King Drive, and south and west of Washington Park demonstrate significant disinvestment, while neighborhoods in the eastern half of this section are more notably stable, built-out and prosperous. The major institutional anchors in the area, particularly the University of Chicago, continue to expand their facilities, and consequently employment and visitor volumes, providing a stabilizing source of energy to the area. Various community organizations are active in this portion of the study area, and in many cases joined in advocacy by the University, with redevelopment projects proposed along Cottage Grove, 53rd Street, and 63rd Street.

The *southern sector of study area* located south of 71st Street features a central core of stable residential neighborhoods, both single-family and multifamily structures. The southernmost areas of the study area border on what have been historically some of the heaviest industrial areas of

⁶ Chicago Housing Authority, Amended FY 2012 Moving to Work Annual Plan HUD Approved – March 27, 2012.

the city, and swaths of industrial uses are found particularly along rail lines here in the study area. One of the most significant development projects in the study area and in the city is the Lakeside redevelopment of the former USX Southworks site. A long-term project currently in planning, this will introduce significant new population and service employment numbers to the study area.

5.0 Public Involvement in Selection of Projects

The public involvement plan encouraged participation of community leaders, business stakeholders, and the general public in framing the set of projects that this study analyzed. Stakeholders identified goals and objectives, participated in selecting the universe of projects, and provided feedback on the project evaluations.

5.1 Stakeholder Identification of Goals and Objectives

Stakeholders provided input on what they felt were the major issues that needed to be addressed in the study. The detailing of major issues led to a set of objectives for the study to address. The major issues and the related study objectives are listed in Table 5.

Table 5. Stakeholder Issues and Resulting Study Objectives

Issue	Objective
Safety - Stations located in areas perceived to be unsafe deter people from using transit for social purposes or at night.	<ul style="list-style-type: none"> 1. Improve safety and security features.
Travel Times - Trips with long travel times discourage people from using transit. Many residents are beyond walking distance of Metra and CTA transit stations, thus requiring them to take the bus to the train, adding travel time to their trips. Long bus travel times also result when buses pick up riders at every stop and/or require transfers.	<ul style="list-style-type: none"> 2. Provide better coverage with high-capacity, high-speed modes, targeting areas where walking distances to stations are above 0.5 miles. 3. Enhance travel time and reliability.
Key Linkages - Transit travel to and from destinations outside of the Loop can be very challenging. East-west travel has been identified as particularly time-consuming, sometimes requiring travel into the Loop to make connections.	<ul style="list-style-type: none"> 4. Identify and strengthen connections and travel options within major east-west corridors to serve work and discretionary trips.
Customer Comfort - Travel can be challenging for specific groups, such as seniors and mothers with children. In addition, waiting for buses and trains can be unpleasant.	<ul style="list-style-type: none"> 5. Improve station and bus environment for users who are waiting.
Frequency of Service - High-traffic bus stops and rail stations sometimes do not adequately accommodate the volume of riders.	<ul style="list-style-type: none"> 6. Improve frequency of service to match demand, especially bus service, in key areas.

Issue	Objective
Seamless Travel – Some neighborhoods are served by commuter rail while others are served by CTA rapid transit. CTA bus service connects to both Metra and CTA rail, but fare transfers are allowed only to CTA rail. In addition, there is limited ability to transfer from cars to CTA (i.e., parking/park-and-ride options).	7. Integrate the network of transit service so users can easily go from one mode or one transit provider to another. 8. Offer more integrated, seamless transfer and fare policies. (Take into account prior and ongoing work on fare integration and recognize service board discretion in setting fares.)
Knowledge of Services – Methods for getting real-time information on bus/rail schedules, travel options, and tracking information are not well known by some riders and nonriders. Additionally, some transit riders do not have access to smart phones or Internet service (i.e., seniors, low-income individuals).	9. Increase creative marketing efforts to ensure that those who have Internet access are aware of these features. 10. Increase information options for those without Internet access.
Economically Viable Neighborhoods – Study area residents must sometimes travel great distances and make complicated trips on transit for work, shopping, entertainment, and other trips due to a lack of options in their neighborhoods. In addition, some station areas are not integrated with pedestrian and bike networks and limit walking and biking access to the transit system.	11. Highlight opportunities to cluster development around existing transportation hubs, particularly rail stations. 12. Complement the transit system improvements with pedestrian, bicycle, and other enhancements to station access.

A complete list of candidate projects was developed utilizing these goals and objectives as a guide, and considering input from stakeholders, the TAC and the PAC.

5.2 Universe of Candidate Improvements

The *Preliminary Alternatives* report listed transportation improvement options developed for the study area ranging from small bus service improvements to major capital improvements. The list of improvement options included projects suggested in; past studies, *Technical Memorandum 1*, meetings with the Technical and Public Advisory Committees, and interviews with stakeholders.

The resulting list of transportation alternatives included 37 projects and represented the full universe of options to be considered. The alternatives were grouped according to similar characteristics resulting in 10 categories of improvements. The 10 categories and the alternatives within each are listed below:

1. Improve frequency of existing services:
 - a. Off-peak and peak at Metra Main Line stations;
 - b. Off-peak on Metra South Chicago Branch;
 - c. Bus routes that are overcrowded;
 - d. East-west bus routes; and
 - e. Express bus routes.
2. Longer service hours (including more nighttime and weekend service to address non-traditional work hours and nonwork travel needs).
3. Fare policy and fare media improvements:
 - a. Special Metra-CTA arrangement for transfers in study area.
4. Marketing and user information improvements:
 - a. Promote Bus Tracker, Train Tracker, and GoRoo;
 - b. Create local Metra route map and schedule;
 - c. Promote any route and fare changes; and
 - d. Bus shelters with real-time information displays.
5. Rail station enhancements (including associated pedestrian/bike/auto access, wayfinding and lighting, security improvements):
 - a. MED stations at 59th, 63rd, 75th, 79th, 83rd, 87th, 91st, and 95th Streets;
 - b. Add new 60th Street entrance at MED Main Line 59th station; and
 - c. Indiana, 43rd Street, 47th Street, Cottage Grove, and Garfield Green Line stations and all Red Line stations.
6. New rail stations on existing rail lines:
 - a. MED 35th – 37th Streets; and
 - b. Green Line at 26th Street, 18th Street, or 22nd-23rd Streets.
7. Local bus circulators, shuttles, and other bus routes:
 - a. Hyde Park/Washington Park/Oakland;
 - b. Extend existing bus routes to Lakeside;
 - c. Establish a bus route on 83rd Street; and
 - d. Establish/restore bus route on 31st Street.

8. Express or limited-stop bus routes to other destination areas:
 - a. Stony Island/Cottage Grove/39th Street;
 - b. To Midway (old #X55); and
 - c. To west Loop (old #X28).
9. New Bus Rapid Transit (BRT) service and enhanced bus corridors:
 - a. Cottage Grove Avenue;
 - b. Stony Island Avenue;
 - c. Garfield Boulevard; and
 - d. 79th Street.
10. New or restructured rail service:
 - a. Cottage Grove Avenue or Drexel Avenue to Loop;
 - b. King Drive to Loop;
 - c. Extension of 10.a or 10.b above along Stony Island Avenue south of 63rd;
 - d. 35th Street;
 - e. E.5th Street/Garfield;
 - f. Extension of Green Line to Stony Island Avenue and MED;
 - g. Gray Line (all MED service);
 - h. Gold Line (South Chicago Branch);
 - i. Conversion of South Chicago Branch to LRT; and
 - j. Conversion of South Chicago Branch to CTA rapid transit via MED or Green Line.

These 37 projects were presented and discussed in meetings with the TAC and PAC members, and were evaluated using the screening criteria listed in Table 6.

Table 6. Evaluation Screening Criteria

Screening Criteria
Maintain or Enhance Service for Existing Riders
Improve Mobility
Address Project Objectives:
<ul style="list-style-type: none"> • Safety/Security; • Coverage; • Key Linkages; • Seamless Travel; • Travel Time/Reliability; • Frequency/Span; • Comfort; and • Information/Understanding.
Support Economic Development
Support Development Plans
Overall Cost to Implement
Capital Costs
Operating Costs
Efficiency and Productivity
Consistent with Service Boards' Objectives and Standards
Ability to Obtain Grant Funding
Factors Affecting Implementation
Physical and Institutional Feasibility
Public Support
Environmental
Equity
Environmental Justice
Timeframe to Implement

The result of this screening process reduced the number of project categories to 5 and the number of alternatives, or example improvements, to 20. These projects are discussed in greater detail in Section 7.0.

5.3 Public Input on Projects

The public meetings provided an opportunity for local residents, community leaders, and business owners to hear updates on the transit study, offer their opinions, share their concerns, hear other view points, and provide the project team with a snapshot of community concerns and reactions to particular proposals. Three public meetings were held to encourage dialogue between the project team and the general public. Formal meetings with the PAC members prior to the public meetings helped to frame the public discussion.

Early in the study a public meeting was conducted to identify issues important to the community at large and stakeholders were interviewed to determine what they felt were the major issues that needed to be addressed.

The first public meeting was held on April 13, 2011 at the Illinois Institute of Technology's University Tech Park on 31st Street within the study area. This first meeting included two presentations – one in the early afternoon and one in the early evening with an Open House preceding each presentation. The first meeting received coverage in the Chicago Tribune as well as local television coverage. Over 100 people attended the first public meeting. It was an opportunity to introduce the study to community members and to learn their initial thoughts and concerns regarding transit issues in the study area.

A second public meeting was held on September 12, 2011 in the Banquet Hall of Apostolic Church of God, 6320 S. Dorchester Avenue, Chicago. The format of the meeting consisted of an Open House portion and a formal PowerPoint presentation. The Open House featured six stations for attendees to meet with the study team representatives and view display boards which provided information about the potential projects that could be implemented within the study area. The consultant team members and members from the Technical Advisory Committee were on hand at each board to answer questions and receive comments on the project alternatives. The open house was held one hour before the formal presentation and for one hour after the presentation. The presentation outlined each service alternative and described the process that was utilized to develop the improvements presented. There were several opportunities for members of the community to comment on the potential projects selected for additional study; during the question and comment period after the presentation, during the open house, and by filling out comment forms given at the beginning of the meeting. All the comments were summarized and reviewed by team members for possible incorporation into the final example project evaluation. Forty-four people attended the meeting in addition to the 19 members from the study team and the sponsoring agencies.

A third public meeting was conducted on June 28, 2012 at Apostolic Church of God and followed the same format as the previous public meeting. More detailed information on the alternative projects was provided at this meeting, including estimates of capital and operating costs, ridership projections, probable impact on TOD, and sources of funding. An overall assessment of each project also was provided along with a list of potential next steps. 32 people attended the meeting and 18 attendees turned in evaluation forms. The evaluation forms asked attendees how well they thought the improvements addressed community needs, and asked them to rate the meeting on its location, time slot, organization, presentation materials, and overall satisfaction.

A review of the evaluation forms submitted by the community attendees showed that in answer to the question, “How well do you think improvements in this Example Project will address community needs?,” two projects tied for the highest rating - Rail Station Enhancements and the Cottage Grove BRT or Streetcar. (Note that the Cottage Grove BRT and Streetcar were not separated on the evaluation form.) The next highest rated project was Transit-Oriented Development. The 79th Street Bus Enhancement and Gold Line projects tied for the number three top spot, while the Garfield BRT and King Drive Enhanced Bus tied for the number four slot. Coming in last, although still receiving positive and enthusiastic comments, was the New Bus Route on 83rd Street.

Attendees agreed that the meeting was held in a safe, easily accessible facility, and was held at a convenient time. Most attendees agreed that the meeting was well organized, that the displays and maps were helpful, and that they were satisfied with the meeting overall. Attendees were mostly neutral about whether they thought their input would be considered and that their questions were answered.

5.4 Potential Projects and Example Improvements

A total of 37 initial projects were identified and subsequently screened to produce a set of 20 potential projects. The potential projects were grouped into categories with similar characteristics for ease of discussion. Based on feedback from the TAC and PAC, one or two example improvements from each category were identified for further evaluation. Table 7 illustrates the resulting categories of projects and the candidate improvements included in each category. The example improvements are identified with an asterisk (*) in the table.

These project categories and example improvements were presented at the second public meeting for comments and feedback. The example improvements are described in greater detail in Section 8.0.

Table 7. Candidate Projects by Category

Project Category	Candidate Projects
Improvements to CTA Bus Network	<ol style="list-style-type: none"> 1. New Bus Route on 83rd Street* 2. King Drive Express Bus Service* 3. Bus Priority on South Lake Shore Drive 4. Shelters and Real-Time Bus Arrival Information 5. Restore Bus Route on 31st Street
Improvements to CTA Rail Network	<ol style="list-style-type: none"> 1. CTA Rail Station Enhancements* 2. Track/Structure Repairs (to eliminate Slow Zones) 3. Extend Green Line to Dorchester Avenue 4. New CTA Station at 26th/27th Street

Project Category	Candidate Projects
North-South Corridor BRT and Streetcar	<ol style="list-style-type: none">1. Cottage Grove BRT*2. Cottage Grove Streetcar*3. Cottage Grove Express Bus Route
East-West Corridor BRT and Enhanced Bus Service	<ol style="list-style-type: none">1. 55th Street/Garfield Boulevard Corridor BRT*2. 79th Street Corridor Enhanced Bus*3. 35th Street Enhanced Bus
Changes to Metra Electric District Rail	<ol style="list-style-type: none">1. Gold Line*2. CTA - Metra Fare Integration3. Gray Line4. Conversion of South Chicago Branch to LRT
Transit-Oriented Development	Evaluate TOD Potential at Stations*

* Example improvements further developed and evaluated in the next phase.

6.0 Projects Underway or In Planning

As part of their ongoing planning efforts, the transit agencies have been conducting reviews of service and facilities, and have plans to implement various improvements that address some of the issues raised by the stakeholders. This section summarizes these ongoing projects.

Metra was granted \$140.9 million through American Recovery and Reinvestment Act of 2009 (ARRA)⁷ which supported a number of capital projects, including the construction of a new station at 35th Street on the Rock Island District Line. This station, which opened in April 2011, is at the western edge of the study area near both the Green and Red Lines and provides South Lakefront residents with an additional access point into the Metra system.

Metra is slated to receive \$1.1 billion from the State of Illinois' 2009 \$2.7 billion capital bond program through 2014 for public transit. The first capital obligation of this funding is the purchase of a fleet of new vehicles for use on the Metra Electric District; the Highliners currently in use date from 1971 and can no longer be rebuilt or refurbished.⁸ In addition, two Electric District stations within the study are scheduled for improvements through the state bond funding: 59th Street and 63rd Street.

The CTA and Chicago Department of Transportation (CDOT) were awarded \$11 million by the FTA to develop a BRT corridor along Jeffery Boulevard.⁹ The project was developed as part of the CTA's BRT Pilot Program.¹⁰ Planning and design work got underway in early 2011 and the project is scheduled to be in service by fall of 2012. The Jeffery Boulevard BRT ("Jeffery Jump") alignment was designed as one of four pilot BRT corridors that would be subsequently expanded to a 20-corridor BRT network. Plans show the BRT service operating in dedicated lanes between 67th and 83rd Street on Jeffery Boulevard during the peak hours, as shown in Figure 5. The route will operate in mixed-traffic on the northern end of the alignment between 67th (where it enters Lake Shore Drive) and the intersection of Washington Boulevard and Jefferson Street in the near West Loop, as well as on the southern end of the alignment between 83rd Street and the intersection of Stony Island and 103rd Street on the south.¹¹ Between 73rd

⁷ Metra, "Proposed 2011 Program & Budget Book", page 8.

⁸ Ibid., page 10.

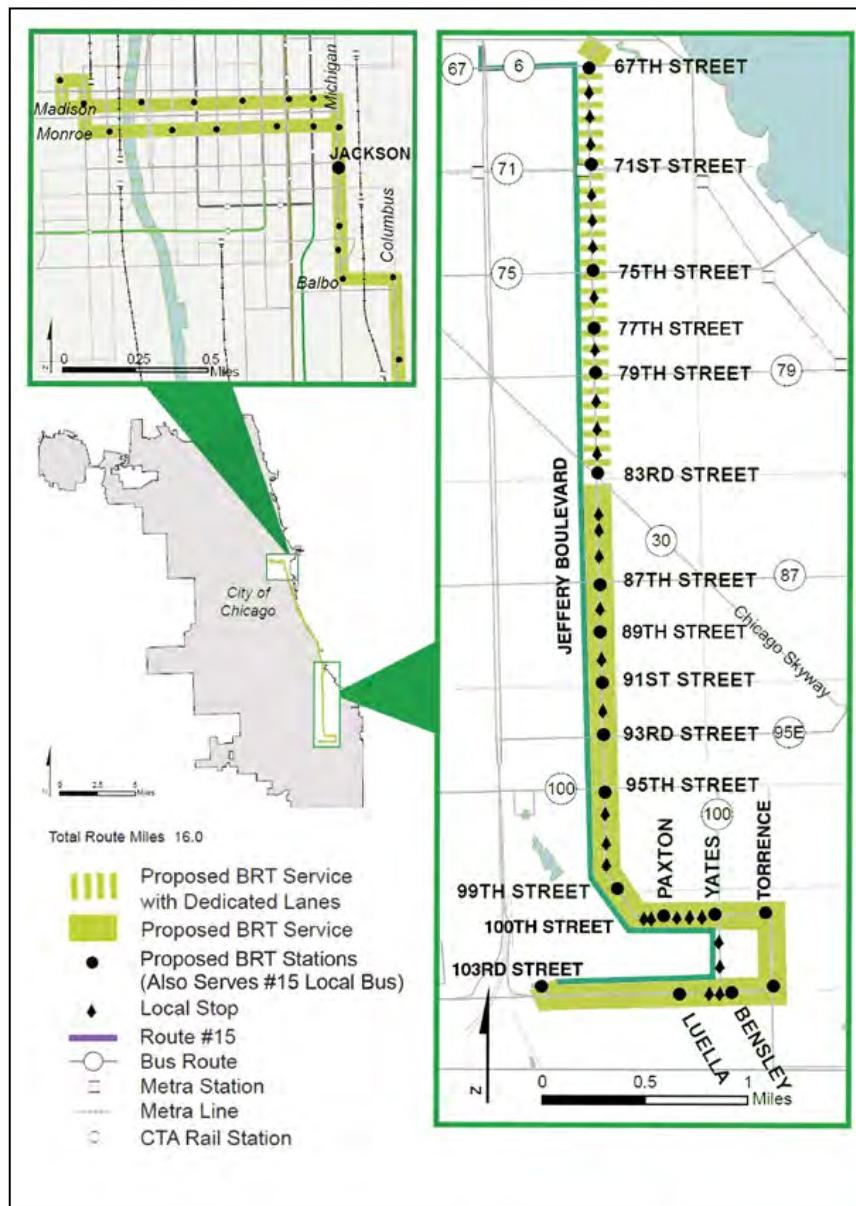
⁹ Chicago Transit Authority, "Meeting the Challenge of a Struggling Economy: President's 2011 Budget Recommendations," page 62.

¹⁰ AECOM, "Traffic Study: Jeffrey Boulevard from 67th Street to 93rd Street," Draft December 9, 2008.

¹¹ CTA and CDOT, "BRT Pilot Program - Jeffrey Boulevard Corridor," <http://www.transitchicago.com/assets/1/brt/105349BRTPilotJeffery.pdf>.

Street and 84th Street buses will receive priority treatment at stop lights. Additionally, a bus bypass lane and dedicated traffic signal will be added northbound on Jeffery Boulevard at Anthony Avenue to allow buses to jump past traffic at that intersection.¹²

Figure 5. Alignment of Jeffery Boulevard BRT



¹²Chicago Sun-Times, “CTA to begin bus rapid transit on South Side in November,” August 8, 2012.

In September 2011, CTA began installation of 400 Light Emitting Diode (LED) Bus Tracker displays at select JCDecaux bus shelters throughout Chicago. All 400 LED units were scheduled to be installed over a one year period. Funds for the purchase and maintenance of the signs were made available through \$1.4 million of CTA funds, a \$1.8 million Innovation, Coordination and Enhancement Grant from Regional Transportation Authority (RTA) and a \$640,000 Federal Transit Administration, Congestion Mitigation and Air Quality (CMAQ) grant. CDOT, which oversees the JCDecaux contract and maintains the public rights-of-way, will be CTA's partner in the operations and maintenance of the LED screens. The locations for the LED signs were selected based on ridership, stops serving multiple bus routes, bus-to-bus transfers, and locations providing transfers to Metra and Pace.

CTA is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street, subject to the availability of funding. The proposed 5.3-mile extension would include three new intermediate stops near 103rd, 111th, and 115th Streets, as well as a new terminal station in the vicinity of 130th Street. Each new stop would include bus and parking facilities. The next step is to prepare an Environmental Impact Statement (EIS) to evaluate environmental, social, and economic impacts of the construction and operation of the proposed project. This project was recommended as a priority project in the region's Go to 2040 Long-Range Transportation Plan.

Stakeholders have identified the lack of seamless and free or low-cost transfers between Metra and CTA services as a detriment to efficient transportation in the corridor. Metra and CTA currently use incompatible fare media and have different fare structures. The Illinois legislature passed legislation (HB3597, effective July 7, 2011) requiring that the Regional Transportation Authority (RTA) develop a policy regarding transfer fares on all fixed-route services provided by the three service boards; Chicago Transit Authority (CTA), Metra, and Pace. Under this policy, RTA is required to set forth the fare sharing agreements between the service boards that apply to interagency passes and tickets. The policy must be developed by January 1, 2013 in consultation with the general public and the service boards. In addition, the RTA is to develop and implement a regional fare payment system by January 1, 2015.

Starting in 2013, a new payment system will allow customers to use a single fare card for CTA and Pace. Customers will be able to pay for CTA and Pace bus and train rides with the following contactless payment methods:

- Ventra Card, a transit and prepaid debit card that can be used for transit and everyday purchases;
- Ventra Tickets, for single-ride and 1-Day passes; and
- Personal bank-issued credit or debit cards.

Customers will be able to "tap" their payment card at 'L' stations or to board any CTA or Pace bus. Special fares and multi-day passes will still be offered, including 30-Day and 7-Day Passes, and cash will still be accepted on buses. Eventually, it will be possible to use compatible mobile phones to pay for rides on CTA and Pace. Ventra will be available to all CTA riders and on Pace's fixed route buses in the summer of 2013. Ventra will replace CTA and Pace's existing fare systems in 2014. Full details are available at www.transitchicago.org/ventra.

In September 2011, the CTA announced implementation of a new station renewal program that applies a "SWAT team" approach to station maintenance. Under this new approach, "Renew Crews," composed of representatives from all maintenance sectors, (plumbers, painters,

carpenters), will converge on a station and work together in a coordinated, comprehensive, and efficient way to make improvements. The project is estimated to cost \$25 million, which is partially funded by \$18 million saved from CTA job cuts. Restoration done at each station will be based on each station's condition and specific needs. Renew Crews will be addressing about 100 CTA rail stations on every rail line. As of this writing (November 2012), the following study area stations are currently undergoing improvements: Indiana, 47th, and 51st stations on the Green Line. Improvements were recently completed at the following study area stations: King Drive, Garfield, 35th-Bronzeville-IIT, 43rd, and Cottage Grove stations on the Green Line and 47th, Cermak-Chinatown, and 95th/Dan Ryan stations on the Red Line.

Starting in spring 2013, the CTA will rebuild the tracks along the south Red Line, from Cermak-Chinatown station to 95th Street station. This project will provide faster, more comfortable, and more reliable service for Red Line riders. Due to current track conditions, Red Line riders experience longer travel times, more-crowded trains, and less-reliable service. The project is made possible by \$1 billion in state and local funding announced in late 2011 by Mayor Rahm Emanuel and Governor Pat Quinn for the Red and Purple Lines. http://www.cityofchicago.org/content/city/en/depts/mayor/press_room/press_releases/2012/march_2012/mayor_emmanuel_announces7billionbuildinganewchicagoprogram.html All components in the track bed will be replaced; ties, rail, third rail, ballast (the stone material that holds the ties in place) and drainage systems. Some stations also will receive improvements ranging from new canopies, paint, and lighting upgrades to new benches and bike racks. Additionally, the stations at Garfield, 63rd, and 87th will get new elevators, making all stations on the South Side Red Line accessible.

7.0 Summary of Evaluation Findings for Example Improvements

Stakeholder and public input was instrumental in identifying potential project categories and example improvements. One or two example improvements were selected from each category for further evaluation as part of this study, and the nine example improvements are summarized in this section. While limited study resources precluded further evaluation of the other project ideas at this time, these projects can be examined in future studies that may be undertaken as follow up to this study. The nine example projects serve many parts of the study area as shown in Figure 6 below:

Figure 6. Location of the Nine Example Improvement Projects



Source: http://www.cityofchicago.org/city/en/depts/dot/supp_info/gis_data.html

Table 8 compares the example project improvements in terms of ridership, operating cost per rider, capital cost, and annual operating cost.

Table 8. Comparison of Example Project Improvements

Example Project Improvement ^a	Weekday Ridership	Operating Cost/Rider	Capital Cost (Millions)	Annual Operating Cost (Millions)
New Bus Route on 83 rd Street	5,300	\$1.56	\$3.7	\$2.9
King Drive Express Bus Service	1,000	\$3.74	-	\$1

Cottage Grove BRT (Curb)	6,500-8,000	\$1.45-\$1.64	\$39-\$72	\$3.3-\$4.6
Cottage Grove BRT (Median)	6,600-8,100	\$1.23-\$1.34	\$65-\$148	\$2.8-\$3.8
Cottage Grove Streetcar Phase 1	8,100	\$1.95	\$240	\$5.5
Cottage Grove Streetcar Phase 1 and 2	11,500	\$2.26	\$370	\$9
55 th St/Garfield Blvd BRT (Curb)	4,800	\$2.80	\$71	\$4.7
55 th St/Garfield Blvd BRT (Median)	4,900	\$2.43	\$136	\$4.1
79 th Street Corridor Enhanced Bus	11,000	\$1.96	\$18-\$27	\$7.4
Gold Line	13,400	\$12.90	\$350 ^b	\$56-60

^a Costs and Ridership not projected for Rail Station Enhancements or TOD Potential.

^b Excluding any costs associated with adding capacity at Millennium Station that may be required.

The following summaries of the example improvements include the findings of the evaluation conducted during this study. Full descriptions of each project are provided in the *Definition and Evaluation of Potential Projects* dated August 31, 2012.

7.1 New Bus Route on 83rd Street

This project adds a new local bus route on an arterial street with no current bus service and would address some gaps in transit coverage identified early in this study. The proposed route would extend from the new Lakeside development on the east to Stewart on the west, making a connection at the 87th or 79th Street station on the Red Line. Although Figure 6 shows the route serving 87th Street, the final route will be determined in consultation with CTA. The 83rd Street bus route is one of the lowest-cost improvements from a capital cost perspective (\$3.7 million), and also has a fairly low operating cost (\$2.9 million per year). The new route is projected to achieve a moderate level of ridership of 5,300 riders per weekday and potentially more as a result of the opening of a Walmart at the west end of the route. The proposed service could be extended to serve the proposed Lakeside development, as well. The route is expected to be quite productive with about 75 passengers per revenue vehicle hour and the weekday operating cost per rider is expected to be low (\$1.56). While some riders attracted to the route may be new riders, others may be diverted from other bus routes. A Federal Jobs Access Reverse Commute (JARC) grant already has been obtained that will provide for some of the operating cost for a limited time period, but a local funding match of 50 percent for operating funds and 20 percent for capital funds is required and has not been obtained.

7.2 Enhanced Bus Service on King Drive

Enhanced bus service on King Drive would restore a peak-period express bus service that was discontinued in 2010 in response to operating budget constraints. From a capital cost perspective, the project has no cost at all as it would use buses that already are in the CTA fleet; the proposed service plan is expected to require fewer buses as a result of the higher speeds

associated with limited-stop express service and a shift in resources from local to express service. The additional operating cost (about \$1 million) is the lowest of all the projects involving additional service, since the limited-stop express service is proposed to operate only during peak hours in the peak direction. Based on prior operation of express service in this corridor (Route #X3), it is expected that a net ridership gain of about 1,000 riders per day would result. The incremental operating cost per additional rider is expected to be fairly low (about \$3.74 per passenger). The riders may include some new riders as well as existing bus and rail riders. There was considerable public support for this proposal, however, this improvement will be competing with proposals to restore other services cut in 2010 made in response to budget constraints.

7.3 Rail Station Enhancements

Enhancements to existing CTA rail stations were identified as a priority project by stakeholders. Community participants expressed the viewpoint that stations exhibit poor conditions and that the environment surrounding stations is inhospitable or intimidating. Particular concerns of stakeholders included the Green Line stations and the 87th Street Red Line Station. Field review of these stations was conducted to assess any deficiencies and identify specific improvements. The findings were reviewed with CTA and ongoing programs for rehabilitation were identified. The study determined that complete reconstruction of stations is not required due to recent rebuilds or renovations of the stations during their useful lifespan. However, recommendations include: 1) implement ongoing maintenance and upgrade program; 2) conduct periodic assessments of station conditions to identify refurbishment needs; 3) identify targeted public infrastructure improvements immediately around stations; and 4) ensure representation of study area stations in pilots of programs, such as the CTA Station Renewal Program and installation of real-time information monitors. The capital costs associated with repairs of CTA stations range from \$0.25 million to \$1 million. As a result of repairs at the CTA stations, a small positive impact can be expected on ridership and the adjacent development environment, as well as a positive impact on quality of life.

7.4 Cottage Grove Bus Rapid Transit (BRT)

The Cottage Grove BRT is intended to improve travel time and reliability as well as service coverage in the entire Cottage Grove corridor. By creating a limited-stop overlay service with BRT features designed to reduce travel delay at signals and bus stops, riders would achieve reduced travel times. Those making longer trips, including travelers from the southern part of the route, would achieve the largest time savings. Because BRT features are a flexible menu of options, there remains a wide range of design options. A “gold standard” BRT, including barrier-separated, dedicated right-of-way, off-board payment at high-quality stations, and identifiable branding would involve a more costly design but would be likely to have the greatest impact in attracting riders and influencing development in the corridor. A simpler approach (e.g., a painted curbside bus lane and less significant stations) would be much less costly but would likely not provide the same impact. Two alignment options were identified. Though both begin at 95th Street, one continues into the Loop from 35th Street via arterial streets (King Drive and Michigan Avenue) while the other utilizes Lake Shore Drive as an express ser-

vice. The Lake Shore Drive option is somewhat less costly to build and operate but serves a somewhat smaller market and achieves a somewhat lower ridership given that no boardings can occur on Lake Shore Drive between 35th Street and the Loop. There are traffic impacts associated with provision of dedicated lanes, as conversion of an existing travel lane and/or an existing parking lane would be necessary. Dedicated bus lanes also impact the level of service (LOS) at high-volume intersections south of 58th Street, where some intersections are expected to perform at LOS F with a bus lane in place. LOS F represents the worst operating condition. The capital costs range from \$39 million to \$148 million depending upon alignment and level of BRT treatment. Operating costs range from \$2.8 million to \$4.6 million annually. This includes savings associated with a 20 percent reduction in route #4 Cottage Grove local bus service. This example improvement and the Cottage Grove Streetcar described below are mutually exclusive projects, in that either a BRT or a streetcar would operate on Cottage Grove Avenue, but not both.

7.5 Cottage Grove Streetcar

The Cottage Grove Streetcar project is envisioned in two possible phases, with Phase 1 operating between the Loop and 63rd Street, and Phase 2 extending south from 63rd Street to 95th Street via Cottage Grove or Stony Island Avenues. The shorter length (8 miles) of Phase 1 is appropriate for streetcar technology and Phase 1 would serve the northern part of the corridor which is undergoing redevelopment. In the Cottage Grove corridor, a streetcar could be provided with limited-stop spacing, exclusive right-of-way and signal priority and therefore could provide travel time advantages like BRT. As a result of these features, the streetcar project is envisioned as one that will provide both development and transportation benefits to the 8-mile corridor and could be extended south of 63rd Street in a second phase (another 4.4 miles). Similar to the BRT project, a Cottage Grove streetcar will have unfavorable impacts on traffic and parking. Impacts on intersection LOS vary depending upon the level of traffic volume. Operating in the median of the roadway has greater impacts due to requirements for protected left turn signals or left turn prohibitions. The Phase 1 streetcar project was estimated to cost nearly \$240 million, which may be eligible for an FTA Small Start project. With the Phase 2 extension, the total project order of magnitude cost would increase to nearly \$370 million exceeding the Small Starts limit but still eligible for New Starts grants. Both Small Starts and New Starts grants are selected nationally from a set of highly competitive projects and they require local match. The operating cost of the Phase 1 streetcar would be approximately \$5.5 million annually. Operating costs for the complete corridor are estimated at \$9 million annually. These operating costs include savings associated with a 20 percent reduction in route #4 Cottage Grove local bus service. The number of daily weekday riders on the Phase 1 streetcar is about 8,100. This example improvement and the Cottage Grove BRT described above are mutually exclusive projects, in that either a BRT or a streetcar would operate on Cottage Grove Avenue, but not both.

7.6 55th Street/Garfield Boulevard Bus Rapid Transit (BRT)

BRT on 55th Street/Garfield Boulevard could provide higher-speed service in an important corridor extending from Hyde Park to Midway Airport. This project achieves a large relative

increase (21 percent) in overall corridor ridership, assuming BRT overlaid on existing local service, but attracts moderate ridership on the limited-stop BRT service (4,800 weekday riders). More detailed engineering would be needed to determine the feasibility of adding or retaining bicycle lanes with BRT treatments. The order of magnitude capital cost could range from \$71 million to \$136 million depending on whether full gold standard BRT is implemented or a lower-cost BRT concept using painted curb lanes and less significant stations. The operating costs would be moderate at \$4.1 to \$4.7 million per year. The weekday operating cost per rider is estimated to be between \$2.43 and \$2.80 per rider. Substantial parking impacts would need to be considered. Overall, this project appears less cost-effective than the 79th Street Enhanced Bus project, which also is an east-west corridor project. However, community input should be considered in determining relative priorities between this and the 79th Street corridor.

7.7 79th Street Enhanced Bus

Enhanced bus service on 79th Street was proposed to address stakeholder concerns that service is slow and overcrowded on this important east-west corridor, which has the highest ridership of all CTA bus routes. The proposed service also could be extended to serve the proposed Lakeside development when it opens. Enhanced bus service rather than BRT is proposed given the existing right-of-way limitations of the arterial – there currently is one travel lane and one parking lane. Nevertheless, a limited-stop bus service with several BRT features is expected to offer travel times that are about 12 percent shorter than on the local bus route. The limited-stop bus route is expected to attract 11,000 weekday riders and increase the corridor bus ridership by about 5 percent. This is the third highest ridership among the projects examined. The limited-stop service is proposed as an overlay on the existing local service and will entail both capital and operating costs. Capital costs are fairly low, ranging from \$18 million to \$27 million depending on several design factors (e.g., need for additional lanes at queue jumpers, need for CTA provided shelters rather than advertising contract shelters, and optional implementation of automated fare payment). Operating cost is moderate at \$7.4 million per year. Weekday operating costs per rider would be quite low (\$1.96). This project is cost-effective, achieving a high ridership but having low capital costs and moderate operating costs.

7.8 Gold Line

The Gold Line would change the service on the Metra Electric District South Chicago Branch to a CTA-like urban transit corridor. The concept is to transfer the line to CTA management, increase frequency of service, enhance and add stations, apply a CTA fare structure, and have CTA contract with Metra for the line's operation in order to utilize existing equipment and infrastructure. Two sketch-planning methods were used to estimate ridership potential and both methods suggest fewer than 14,000 daily weekday riders would use the service compared to just over 8,000 today. The capital cost of the Gold Line is substantially impacted by whether or not additional capacity on the Metra Electric District, particularly at Millennium Station, is required. A separate study to perform a simulation of operations is needed to definitively determine the need for expanded capacity. If it were assumed that capacity expansion at Millennium Station and along the main line was not needed, the capital cost per new rider

would be over \$13 and the overall cost per new rider (including operating costs) would be over \$35. If costly capacity expansion is required at Millennium station, the cost per rider could be much higher. The operating cost of the Gold Line service plan would be substantial at approximately \$60 million annually. The average operating cost per rider would be \$12.90. Current operating costs per rider are about \$8 per rider. Since this proposal suggests CTA contract with Metra to provide the service, CTA would be taking the risk of revenue shortfalls and increasing subsidy. Given the current financial condition of CTA, this seems highly unlikely. In addition, it is expected that a share of the ridership would come from existing CTA services that might not be able to be substantially reduced or terminated. Furthermore, given the relatively low cost-effectiveness of the project, obtaining the necessary Federal New Starts funding would be very difficult. TOD impacts are not expected to be large since there already is existing rail service in the corridor. Without a large development impact and given the relatively poor prospective cost-effectiveness and funding opportunities, the project is not recommended to advance. Ridership on the Metra Electric District should be monitored closely before and after the regional fare payment system implementation to determine if additional demand is observed that would merit further detailed studies of this proposal (or other proposals for the MED).

7.9 Transit-Oriented Development

Transit-Oriented Development (TOD) is a development pattern characterized by higher-density and mixes of land uses designed to maximize multimodal access and to facilitate walking and use of transit. In Chicago, the preferred term for TOD is “Transit-Friendly Development” or TFD, because the city already is highly transit-oriented by virtue of the existing CTA and Metra fixed transit infrastructure. To maximize investment in the City’s infrastructure and to make most efficient use of developable urban land, new development, or redevelopment projects should be concentrated around the transit infrastructure to the greatest extent possible and appropriate to the neighborhood typology. Figure 7 is a map showing these TOD assessments by rail station nodes: these already have been adopted for the CTA rail stations, and are recommended to be similarly formalized for the Metra commuter rail stations in the area. To further support TOD in the study area, the City can ensure that public policies are supportive by formalizing TFD typologies for all station areas; reviewing zoning classifications so that “by right” uses are consistent with TOD plans and overall economic health; supporting neighborhood infrastructure planning; and implementing pedestrian and bicycle access and safety initiatives. For station areas that have a longer-term time horizon for redevelopment or more challenging development conditions, a high degree of collaboration between public agencies and private or nonprofit community groups will be required to encourage concept planning, coordinate infill and new private sector developments, and market TOD candidate neighborhoods to the development community.

Figure 7. Stations with TOD Potential



8.0 Next Steps

This study evaluated a number of potential transit improvements in the South Lakefront area. Many of these improvements are relatively low cost that will improve mobility for these communities. The higher-cost improvements, such as the gold standard BRT or streetcar alternatives, are worthy of consideration when local financing is available. The following list of next steps provides a general outline of actions to improve transit service in the study area. More detailed next steps for each individual project are included in the *Definition and Evaluation of Potential Projects*.

- Identify potential funding:
 - Identify local funding to match any existing or potential Federal grants for new services;
 - Identify sources of ongoing operating funding; and
 - Be ready to pursue new Federal grants under a new transportation bill for the highest priority projects.
- Establish clear priorities:
 - Continue to monitor station conditions and identify those most in need of attention;
 - Evaluate priorities for BRT and other new corridor services in Chicago DOT BRT Plan;
 - Monitor ridership and need for more service on express bus routes and on Metra once fare integration is implemented; and
 - Evaluate demand for Gold Line.
- Advance Implementation:
 - Ensure representation of study area stations in CTA's maintenance and capital programs;
 - Work with communities to implement enhancements around stations;
 - Recommend that Metra implements programmed station improvements once the state bonding funds are released;
 - Recommend that the Gold Line is considered in Metra's current and future strategic planning processes;
 - Consider incremental improvements;
 - Conduct more detailed evaluation of traffic and parking impacts of corridor improvement proposals and discuss options with the community; and
 - Pursue TOD and market the candidate neighborhoods.

